Proposed Claims for interview 3-15-2011, USSN 10/567,071

1. (new, instead of claim 1) A computer implemented method for processing data for a spreadsheet system model, comprising:

providing a spreadsheet model specification in a computer system with a plurality of item types which may potentially be provided in the spreadsheet, including:

at least one first-type item for which input data can be put into the computer system to indicate that said first-type item can be included in the spreadsheet; and

at least one second-type item, wherein second-type items are putatively determinable from an operation performed on data stored in a first database, and wherein second-type items can be included in the spreadsheet if ascertained to be determinable;

putting said input data into the system;

searching, using a processor for the computer system, the input data for a first-type item;

storing said first-type item found by the searching step in the first database,

performing an iterative process to ascertain whether the first database includes one or more prerequisite items needed to determine a putative second-type item, wherein:

(a) each iteration comprises successively reading a putative second-type item and ascertaining whether the first database includes the prerequisite items needed to determine said putative second-type item, and if the first database does include prerequisite items sufficient to determine said second-type item, automatically storing that second-type item in the first database, such that said second-type item becomes available as a potential prerequisite item for other putative second-type items in subsequent iterations;

(b) the iterative process is automatically terminated when an iteration fails to store a second-type item in the first database which was not stored there in a previous iteration, thus indicating that all putative second-type items logically determinable from said stored data have been determined and stored in the first database; and

(c) re-assessing in each iteration putative second-type items that could not be determined in previous iterations due to lack of a prerequisite item, by taking into account second-type items stored in the first database by previous iterations; and

outputting an indication that the spreadsheet system model can be produced if items of the model specification are stored in the first database.

CLAIMS 2 onwards:

2. (cancelled)

3. (cancelled, but to be reinstated with amendments) The method as claimed in claim 1 including at least two second type items.

4. (amended~~previously presented~~) The method as claimed in claim 1 wherein in the iterative determining process ~~successively automatically reading second item types~~ comprises successively automatically reading only second-type items ~~types~~ not previously stored in the first database.

5. (previously presented) The method as claimed in claim 1 wherein said first database further comprises modules; and, said method further comprising the step of storing said first-type item ~~types~~ in said modules.

6. (previously presented) The method as claimed in claim 5 further comprising: configuring each said module to perform operations on said ~~data associated with said first item types~~ first-type items having at least one similar characteristic which are stored in a same said module.

7. (previously presented) The method as claimed in claim 1 further comprising the step of sorting said ~~at least one first item type and said at least two second item types, said first item associated data, and said second item associated data~~ first- and second- type items as ~~said at least one first item type and said at least two second item types, and said second item associated data~~ they are stored in the first database.

8. (previously presented) The method as claimed in claim 1 wherein said first- and second- type items~~at least one first item type and said at least two second item types further~~ comprise predetermined items~~; and, said method further comprising: the system producing an output indication if said predetermined items are stored in the first database~~.

9. (previously presented) The method as claimed in claim 1 ~~further comprising~~wherein ~~the step of~~ the or each second-type item is associated with an item determinant which specifies the or each prerequisite item for evaluation of the second-type item~~determining whether a second item type from said at least two second item types can be stored in the first database by associating the second item type with an item determinant which specifies the or each prerequisite item for evaluation of the second item type.~~

10. (previously presented) The method as claimed in claim 9 ~~further~~ comprising a determining~~ant~~ step of searching the first database for the or each prerequisite item of the second-type item~~type~~.

11. (original) The method as claimed in claim 10 wherein the determining step includes a Boolean operation which produces a true or false result depending on whether the or each prerequisite item is located in the first database.

12. (original) The method as claimed in claim 11 wherein the first database includes one or more separate storage areas.

13. (previously presented) The method as claimed in claim 11~~12~~ wherein the result of said determining step is true if the or each prerequisite item is located in the first database.

14. ~~(previously presented) The method as claimed in claim 1 wherein said at least one first item type and said at least two second item types further comprise input items and the at least one first item type corresponds to said input items.~~

15. ~~(previously presented) The method as claimed in claim 1 wherein the second item types have corresponding item determinants.~~

16. (cancelled)

17. (currently amended) The method as claimed in claim 13~~15 further~~ comprising ~~the step of adding~~ storing a second-type item ~~type from said at least two second item types to~~ in the first database if the associated item determinant evaluates to true.

18. (previously presented) The method as claimed in claim 17 further comprising the step of providing a consolidated storage array for storing items of the second type and for evaluating said item determinants.

19. (previously presented) The method as claimed in claim 18 further comprising the step of evaluating the item determinant for each said second-type item ~~type~~ not stored in the first database.

~~20. (previously presented) The method as claimed in claim 19 further comprising the step of storing in the first database each said second item type for which the item determinant is true.~~

21. (previously presented) The method as claimed in claim ~~20~~ 19~~further~~ comprising the step of storing said second-type items ~~types~~ in a second database if associated prerequisite items for said second-type items ~~types~~ are not located in the first database.

22. (previously presented) The method as claimed in claim 21 ~~further~~ comprising the step of repeating the evaluating step for any said second-type items ~~type~~ in the second database.

~~23. (previously presented) The method as claimed in claim 22 further comprising the storage step of storing in the first database each said second item type stored in the second database for which the item determinant is evaluated as true by the repeated evaluation step.~~

24. (previously presented) The method as claimed in claim 23 wherein the evaluating and storing steps are repeated, in corresponding iterations until the ~~storage step~~iterative process results in no additional ~~said~~ second-type items ~~types~~ being ~~added to~~ stored in the first database.

25. (previously presented) The method as claimed in claim 22 ~~23 further~~ comprising repeating the evaluating and storing steps until all said evaluated item determinants are false.

26. (original) The method as claimed in claim 22~~3~~ wherein the second database comprises a consolidated instance array.

27. (previously presented) The method as claimed in claim 26 further comprising the step of adding said second-type items for which the item determinants evaluate to false to the second database.

28. (previously presented) The method as claimed in claim 27 wherein any said second-type item stored in ~~added to~~ the first database after the evaluating step is performed on the second database ~~results in the removal of said added second item~~ is removed from the second database.

29. (previously presented) The method as claimed in claim 28 wherein the evaluation step is repeated on said second-type items ~~types~~ remaining in the second database at least one further time after any ~~if the remaining~~ second-type item ~~type~~ is transferred to the first database.

30. (previously presented) The method as claimed in claim 29 further comprising the step of storing formulae for said second-type items ~~types~~ in a formula database and evaluating each said first and/or second type item ~~type~~ stored in the first database in accordance with an associated formula stored in a formula database, and associating with each said second-type item all of said first- and/or second- type item types required before the said second-type item can be determined.

~~31. (previously presented) The method as claimed in claim 30 further comprising the step of associating with each said second item type all of said first at least one item type and/or said at least two second item types required before the second item type can be evaluated.~~

32. (cancelled)

33. (previously presented) The method as claimed in claim 1, wherein the computer system determines which second-type item types to read by

determining which second-type items ~~types~~ could exist, based on data in the first database.

34. (previously presented) The method as claimed in claim 1, wherein the spreadsheet model specification includes said at least two second-type items ~~types~~ by at least one of: listing a plurality of second-type items ~~types~~; or, defining one or more classes of the second-type item ~~type~~, from which a number of unambiguously identifiable second-type items ~~types~~ can be determined.

~~35. (previously presented) The method as claimed in claim 1 further comprising a step of automatically outputting a list of the first and second item types stored in the first database which can be usefully included in a spreadsheet in accordance with the spreadsheet system model.~~

36. (new) The method according to claim 18 wherein one or more iterations of the iterative determining process comprises generating one or more putative second-type items ~~types~~ for subsequent reading and assessment.

37. (new) The method according to claim 1 wherein at least one putative second-type item ~~type~~ is provided which can be assessed as being able to be determined only if: the first database includes one or more prerequisite items necessary to determine said second-type item ~~type~~; and the first database does not include one or more other specific first or second type items ~~types~~, not being prerequisite items of said putative second-type item ~~type~~.

38. (new) A computer implemented method for processing data for a spreadsheet system model, including the steps of:
providing a spreadsheet model specification in a computer system, the spreadsheet model specification including a plurality of types of item, in respect of which entries may potentially be provided in a spreadsheet to which the spreadsheet system model relates, the types of item including:
at least one first-type item ~~type wherein first item associated data is~~ for which input data is input into the computer system; and
at least one putative second-type item ~~type~~ wherein second-type items ~~associated data can be obtained~~are putatively determinable from ~~an~~ operations performed on ~~stored~~ data stored in a first database, associated with at least one of said first or second type items ~~types~~, ~~stored in a first database,~~ and wherein second-type items are included in the database if ascertained to be determinable ~~types are not input data~~;
~~automatically~~ searching, using a processor for the computer system, the input data for ~~at least one~~a first-type item ~~type~~;
~~automatically~~ storing ~~data associated with~~ said ~~at least one~~ first-type item ~~type~~ found by the searching step, in the first database,
~~automatically~~ performing an iterative ~~determining~~ process, using the processor, ~~for~~to ascertain~~determining~~ whether the first database includes one or more prerequisite items necessary to determine ~~each of a number of~~a putative

second-type item ~~types~~, the iterative determining process comprising performing a plurality of iterations, wherein:

(a) each iteration ~~of the determining process~~ comprises successively automatically reading the or each putative second-type item ~~types~~;

associating ~~each respective~~the or each second-type item ~~type~~ with an item determinant which specifies the or each prerequisite item for evaluation of said ~~respective~~ second-type item ~~type~~;

for the or each second type item, searching the first database for the or each prerequisite item for said~~each respective~~ second-type item ~~type~~;

applying a Boolean operation which produces a true or false result depending on whether the or each prerequisite item is located in the first database; and

storing in the first database the~~each~~ second-type item ~~type for which~~if the item determinant is true; and

(b) the iterative determining process performs repeated iterations according to step (a) indefinitely until an iteration evaluates the determinants of all second-type items ~~types~~ not stored in the first database in previous iterations as false, ~~wherein, at the termination of the iterative determining process, the storage of an item type in the first database is an indication that the stored item type may usefully be included in a spreadsheet in accordance with the spreadsheet system model~~; and

automatically outputting, using the processor, an indication that the spreadsheet system model can be produced if items of the model specification are stored into the first database.

New claim:

"The method as claimed in claim 1, wherein storing an item in the first database comprises storing data associated with that item ~~type~~ in the first database, said data associated with that ~~first~~ item ~~type~~ being a name or other flag indicative of the particular item.